

(b) (6), (b) (7)(C)

Here is my version of the events that occurred with the thermal oxidizer and the scrubber:

1. The thermal oxidizer incident occurred on a Saturday. (b) (6), (b) (7) the oil facility supervisor, called me on my cell phone and told me that the thermal oxidizer had turned off so I walked back to figure out why and to get it back up and running. At the time of the shutdown (b) (6) was transferring some MEK water (distillation bottoms) from the distillation unit over into one of the heat tanks in the oil facility to remove the low flash point from the water so that it could be sent up to the waste water facility for treatment and discharge. When I turned the thermal oxidizer back on it was at 1495 degrees (F), which is not an abnormally high temperature for the unit to run at (the ideal set temperature is 1300 degrees, but the unit does not shut itself down until 1750 degrees (F)). Therefore I didn't think anything of turning the unit back on. After restarting the unit (b) (6) and I went over to turn the scrubber on (which all vapors were pulled through prior to reaching the thermal oxidizer). While I was in the process of turning the scrubber motor up is when the incident occurred. I only had the scrubber turned up to about 20 Hz or so when the incident occurred. We normally ran the scrubber around 45 Hz. I think what may have potentially happened is that we moved the MEK water to a tank that was already heated, therefore increasing the amount of vapors being emitted from the MEK water once it reached the tank. This may have caused a mix of air too concentrated with volatile vapors for the thermal oxidizer to process (especially when being "force fed" from the scrubber unit), resulting in a "flash" inside the unit and/or the duct work between the unit and the scrubber.

2. The scrubber incident occurred almost a little over a week later. (b) (6), (b) (6), (b) (7)(C) were working on repairing the thermal oxidizer, which sits about 5 feet away from the scrubber (which was in operation at the time). Due to the thermal oxidizer being disabled and the reduced capability of the carbon scrubber, we had cut back on our processes in order to avoid sending more vapor to the scrubber than it could eliminate. The only tank that was being heated at the time of the scrubber incident was an oil tank with little to no volatiles in it. However, other tanks (potentially with some volatiles in them) were being slightly vented to the scrubber system at the time. (b) (6), (b) (7)(C) were grinding and/or welding on the top edge of the thermal oxidizer, and what may have happened is that a hot piece of metal from the grinding and/or welding may have landed on the rubber/plastic hose connecting the "liquid" portion of the scrubber (which was empty) to the portion of the scrubber which hold the carbon (which was full). If a hot piece of metal burned through that hose it would have come in contact with the vapors being pulled through the scrubber. And if those vapors had any BTU value then they could ignite.

This is my best guess at what happened, how, and why.

(b) (6), (b) (7)(C)